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SEQUENCE LISTING

<110> Clark, Georgina Jane
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<120> THERAPEUTIC AND DIAGNOSTIC AGENTS

<130> DAVI257.001APC

<140> US 10/536,677

<141> 2005-05-27

<150> PCT/AU2003/001586

<151> 2003-11-28

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<213> Homo sapiens

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 35 40 45

His Arg Thr Leu Asn Lys Phe Trp Cys Arg Pro Pro Gln Ile Leu Arg
 50 55 60

Cys Asp Lys Ile Val Glu Thr Lys Gly Ser Ala Gly Lys Arg Asn Gly
 65 70 75 80

Arg Val Ser Ile Arg Asp Ser Pro Ala Asn Leu Ser Phe Thr Val Thr
 85 90 95

Leu Glu Asn Leu Thr Glu Glu Asp Ala Gly Thr Tyr Trp Cys Gly Val
 100 105 110

Asp Thr Pro Trp Leu Arg Asp Phe His Asp Pro Ile Val Glu Val Glu
 115 120 125

Val Ser Val Phe Pro Ala Gly Thr Thr Thr Ala Ser Ser Pro Gln Ser
 130 135 140

Ser Met Gly Thr Ser Gly Pro Pro Thr Lys Leu Pro Val His Thr Trp
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145 150 155 160

Pro Ser Val Thr Arg Lys Asp Ser Pro Glu Pro Ser Pro His Pro Gly
165 170 175

Ser Leu Phe Ser Asn Val Arg Phe Leu Leu Leu Val Leu Leu Glu Leu
180 185 190

Pro Leu Leu Leu Ser Met Leu Gly Ala Val Leu Trp Val Asn Arg Pro
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20          25          30

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Val Gln Cys Pro Tyr Glu Lys Glu His Arg Thr Leu Asn Lys Tyr Trp
35          40          45

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Cys Arg Pro Pro Gln Ile Phe Leu Cys Asp Lys Ile Val Glu Thr Lys
50          55          60

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Gly Ser Ala Gly Lys Arg Asn Gly Arg Val Ser Ile Arg Asp Ser Pro
65          70          75          80

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Ala Asn Leu Ser Phe Thr Val Thr Leu Glu Asn Leu Thr Glu Glu Asp
85          90          95

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Ala Gly Thr Tyr Trp Cys Gly Val Asp Thr Pro Trp Leu Arg Asp Phe
100         105         110

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His Asp Pro Val Val Glu Val Glu Val Ser Val Phe Pro Ala Ser Thr
115        120        125

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Ser Met Thr Pro Ala Ser Ile Thr Ala Ala Lys Thr Ser Thr Ile Thr
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130

135

140

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145 150 155 160

Thr His Ser Ala Ser Ile Gln Glu Glu Thr Glu Glu Val Val Asn Ser
165 170 175

Gln Leu Pro Leu Leu Leu Ser Leu Leu Ala Leu Leu Leu Leu Leu Leu
180 185 190

Val Gly Ala Ser Leu Leu Ala Trp Arg Met Phe Gln Lys Trp Ile Lys
195 200 205

Trp Ile Lys Ala Gly Asp His Ser Glu Leu Ser Gln Asn Pro Lys Gln
210 215 220

Ala Ala Thr Gln Ser Glu Leu His Tyr Ala Asn Leu Glu Leu Leu Met
225 230 235 240

Trp Pro Leu Gln Glu Lys Pro Ala Pro Pro Arg Glu Val Glu Val Glu
245 250 255

Tyr Ser Thr Val Ala Ser Pro Arg Glu Glu Leu His Tyr Ala Ser Val
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35 40 45

Trp Cys Arg Gly Gln Tyr Asp Thr Ser Cys Glu Ser Ile Val Glu Thr
50 55 60

Lys Gly Glu Glu Lys Val Glu Arg Asn Gly Arg Val Ser Ile Arg Asp
65 70 75 80

His Pro Glu Ala Leu Ala Phe Thr Val Thr Met Gln Asn Leu Asn Glu
85 90 95

Asp Asp Ala Gly Ser Tyr Trp Cys Lys Ile Gln Thr Val Trp Val Leu
100 105 110

Asp Ser Trp Ser Arg Asp Pro Ser Asp Leu Val Arg Val Tyr Val Ser
115 120 125

Pro Ala Ile Thr Thr Pro Arg Arg Thr Thr His Pro Ala Thr Pro Pro
130 135 140

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Ile Phe Leu Val Val Asn Pro Gly Arg Asn Leu Ser Thr Arg Glu Val
145 150 155 160

Leu Thr Gln Asn Ser Gly Phe Arg Leu Ser Ser Pro His Phe Leu Leu
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Val Val Leu Leu Lys Leu Pro Leu Leu Leu Ser Met Leu Gly Ala Val
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<210> 7

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<213> Homo sapiens

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Gly Ser Glu Gln Gly Ser Leu Thr Val Gln Cys Ala Tyr Gly Ser Gly
35 40 45

Trp Glu Thr Tyr Leu Lys Trp Arg Cys Gln Gly Ala Asp Trp Asn Tyr
50 55 60

Cys Asn Ile Leu Val Lys Thr Asn Gly Ser Glu Gln Glu Val Lys Lys
65 70 75 80

Asn Arg Val Ser Ile Arg Asp Asn Gln Lys Asn His Val Phe Thr Val
85 90 95

Thr Met Glu Asn Leu Lys Arg Asp Asp Ala Asp Ser Tyr Trp Cys Gly
100 105 110

Thr Glu Arg Pro Gly Ile Asp Leu Gly Val Lys Val Gln Val Thr Ile
115 120 125

Asn Pro Ala Gln Cys Leu Ser Leu Leu Pro Thr Asp Asp Arg Val Met
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Val Pro Val Ser Ala His Arg Pro Lys Gly Pro Pro Ser Leu Val Thr
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 35 40 45

Cys Arg Gln Pro Cys Leu Pro Ile Trp His Glu Met Val Glu Thr Gly
 50 55 60

Gly Ser Glu Gly Val Val Arg Ser Asp Gln Val Ile Ile Thr Asp His
 65 70 75 80

Pro Gly Asp Leu Thr Phe Thr Val Thr Leu Glu Asn Leu Thr Ala Asp
 85 90 95

Asp Ala Gly Lys Tyr Arg Cys Gly Ile Ala Thr Ile Leu Gln Glu Asp
 100 105 110

Gly Leu Ser Gly Phe Leu Pro Asp Pro Phe Phe Gln Val Gln Val Leu
 115 120 125

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Val Ser Ser Ala Ser Ser Thr Glu Asn Ser Val Lys Thr Pro Ala Ser
130 135 140

Pro Thr Arg Pro Ser Gln Cys Gln Gly Ser Leu Pro Ser Ser Thr Cys
145 150 155 160

Phe Leu Leu Leu Pro Leu Leu Lys Val Pro Leu Leu Leu Ser Ile Leu
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<212> DNA

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<213> Homo sapiens

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20     25     30

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Thr Val Gln Cys His Tyr Lys Gln Gly Trp Glu Thr Tyr Ile Lys Trp
35     40     45

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Trp Cys Arg Gly Val Arg Trp Asp Thr Cys Lys Ile Leu Ile Glu Thr
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Arg Gly Ser Glu Gln Gly Glu Lys Ser Asp Arg Val Ser Ile Lys Asp
65     70     75     80

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Asn Gln Lys Asp Arg Thr Phe Thr Val Thr Met Glu Gly Leu Arg Arg
85     90     95

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Asp Asp Ala Asp Val Tyr Trp Cys Gly Ile Glu Arg Arg Gly Pro Asp
100    105    110

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Leu Gly Thr Gln Val Lys Val Ile Val Asp Pro Glu Gly Ala Ala Ser
115    120    125

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Thr Thr Ala Ser Ser Pro Thr Asn Ser Asn Met Ala Val Phe Ile Gly
130    135    140

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<210> 13

<211> 812

<212> DNA

<213> Homo sapiens

<400> 13

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<213> Homo sapiens

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Arg Gly Ser Leu Thr Val Gln Cys Val Tyr Arg Ser Gly Trp Glu Thr
 Page 12

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 Thr Gly Asn Asp Leu Gly Val Thr Val Gln Val Thr Ile Asp Pro Ala
 115 120 125
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 His Leu Asp Asn Arg His Lys Leu Leu Lys Leu Ser Val Leu Leu Pro
 145 150 155 160
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<210> 16

<211> 287

<212> PRT

<213> mouse

<400> 16

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20          25          30

Val Ser Leu Arg Cys Thr Tyr Val Glu Lys Met Lys Glu His Arg Lys
35          40          45

Tyr Trp Cys Arg Gln Gly Gly Ile Leu Val Ser Arg Cys Gly Asp Ile
50          55          60

Val Tyr Ala Asn Gln Asp Gln Glu Val Thr Arg Gly Arg Met Ser Ile
65          70          75          80

Arg Asp Ser Pro Gln Glu Leu Ser Met Thr Val Ile Met Arg Asp Leu
85          90          95

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2635494_1.TXT

Thr Leu Lys Asp Ser Gly Lys Tyr Trp Cys Gly Ile Asp Arg Leu Gly
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Arg Asp Glu Ser Phe Glu Val Thr Leu Ile Val Phe Pro Gly Ser Ser
115 120 125

Arg Pro Val Val Trp Leu Pro Leu Thr Thr Pro Gln Asp Ser Arg Ala
130 135 140

Val Ala Ser Ser Val Ser Lys Pro Ser Val Ser Ile Pro Met Val Arg
145 150 155 160

Met Met Ala Pro Val Leu Ile Leu Leu Ser Leu Leu Leu Ala Ala Gly
165 170 175

Leu Ile Ala Phe Gly Ser His Met Leu Arg Trp Arg Lys Lys Ala Trp
180 185 190

Leu Ala Thr Glu Thr Gln Lys Asn Glu Lys Val Tyr Leu Glu Thr Ser
195 200 205

Leu Pro Gly Asn Gly Trp Thr Thr Glu Asp Ser Thr Ile Asp Leu Ala
210 215 220

Val Thr Pro Glu Cys Leu Arg Asn Leu Asn Pro Ser Ala Val Pro Ser
225 230 235 240

Pro Glu Thr Gln Asn Leu Ser Gln Ser Thr Glu Glu Glu Glu Ala Ala
245 250 255

Arg Ser Leu Asp Asp Asp Lys Glu Asp Val Met Ala Pro Pro Pro Leu
260 265 270

Gln Met Ser Ala Glu Glu Leu Ala Phe Ser Glu Phe Ile Ser Val
275 280 285

<210> 17

<211> 1111

<212> DNA

<213> mouse

<400> 17

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2635494_1.TXT

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<210> 18

<211> 314

<212> PRT

<213> mouse

<400> 18

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Met Thr Gln Leu Ala Ser Ala Val Trp Leu Pro Thr Leu Leu Leu Leu
1           5           10           15

```

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Leu Leu Leu Phe Trp Leu Pro Gly Cys Val Pro Leu His Gly Pro Ser
20           25           30

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Thr Met Thr Gly Ser Val Gly Gln Ser Leu Ser Val Ser Cys Gln Tyr
35           40           45

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Glu Glu Lys Phe Lys Thr Lys Asp Lys Tyr Trp Cys Arg Gly Ser Leu
50           55           60

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2635494_1.TXT

Lys Val Leu Cys Lys Asp Ile Val Lys Thr Ser Ser Ser Glu Glu Ala
65 70 75 80

Arg Ser Gly Arg Val Thr Ile Arg Asp His Pro Asp Asn Leu Thr Phe
85 90 95

Thr Val Thr Tyr Glu Ser Leu Thr Leu Glu Asp Ala Asp Thr Tyr Met
100 105 110

Cys Ala Val Asp Ile Ser Leu Phe Asp Gly Ser Leu Gly Phe Asp Lys
115 120 125

Tyr Phe Lys Ile Glu Leu Ser Val Val Pro Ser Glu Asp Pro Gly Pro
130 135 140

Thr Leu Glu Thr Pro Val Val Ser Thr Ser Leu Pro Thr Lys Gly Pro
145 150 155 160

Ala Leu Gly Ser Asn Thr Glu Asp Arg Arg Glu His Asp Tyr Ser Gln
165 170 175

Gly Leu Arg Leu Pro Ala Leu Leu Ser Val Leu Ala Leu Leu Leu Phe
180 185 190

Leu Leu Val Gly Thr Ser Leu Leu Ala Trp Arg Met Phe Gln Lys Arg
195 200 205

Leu Val Lys Ala Asp Arg His Pro Glu Leu Ser Gln Asn Leu Arg Gln
210 215 220

Ala Ser Glu Gln Asn Glu Cys Gln Tyr Val Asn Leu Gln Leu His Thr
225 230 235 240

Trp Ser Leu Arg Glu Glu Pro Val Leu Pro Ser Gln Val Glu Val Val
245 250 255

Glu Tyr Ser Thr Leu Ala Leu Pro Gln Glu Glu Leu His Tyr Ser Ser
260 265 270

Val Ala Phe Asn Ser Gln Arg Gln Asp Ser His Ala Asn Gly Asp Ser
275 280 285

Leu His Gln Pro Gln Asp Gln Lys Ala Glu Tyr Ser Glu Ile Gln Lys
290 295 300

Pro Arg Lys Gly Leu Ser Asp Leu Tyr Leu
305 310

<210> 19

<211> 711

<212> DNA

<213> mouse

<400> 19

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<210> 20

<211> 236

<212> PRT

<213> mouse

<400> 20

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Met Trp Leu Ser Pro Ala Leu Leu Leu Leu Ser Phe Pro Gly Cys Leu
 1          5          10          15

Ser Ile Gln Gly Pro Ala Leu Val Arg Gly Pro Glu Gln Gly Ser Val
          20          25          30

Thr Val Gln Cys Arg Tyr Ser Ser Arg Trp Gln Thr Asn Lys Lys Trp
          35          40          45

Trp Cys Arg Gly Ala Ser Trp Ser Thr Cys Arg Val Leu Ile Arg Ser
          50          55          60

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2635494_1.TXT

Thr Gly Ser Glu Lys Glu Thr Lys Ser Gly Arg Leu Ser Ile Arg Asp
65 70 75 80

Asn Gln Lys Asn His Ser Phe Gln Val Thr Met Glu Met Leu Arg Gln
85 90 95

Asn Asp Thr Asp Thr Tyr Trp Cys Gly Ile Glu Lys Phe Gly Thr Asp
100 105 110

Arg Gly Thr Arg Val Lys Val Asn Val Tyr Phe Gly His Met Gln Thr
115 120 125

Phe Phe Ser Ser Ala Ala Thr Leu Thr Pro Glu Arg Ala Ala Glu Met
130 135 140

Trp Val Lys Ile Pro Cys Arg Leu Leu Ile Asn Phe Pro Gly Pro Leu
145 150 155 160

Trp Thr Ala Val Gln Thr Trp Cys Leu Leu Thr Cys Arg Arg Gly Leu
165 170 175

Glu Ala Ser Leu Val Gly Ala Phe Val Gly Gly Leu Met Gln Val Pro
180 185 190

Ser Cys Ser Leu Ala Val Ala Ile Phe Thr Phe Val Leu Thr Leu Thr
195 200 205

Pro Pro Ser Ser Gln Glu Ala His Ser Thr Pro Ser Ser His Ser Ala
210 215 220

Pro Val Ala Ser Lys Glu Glu Met Asn Arg Leu Phe
225 230 235

<210> 21

<211> 819

<212> DNA

<213> mouse

<400> 21

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acaagaaggt ggttgcttg gctctgttac acacatctgg attccagcag cgacctggag 120

ttttctggag acagtaccca gtgaggcagg aggatgaggc tatgtgcagg tctgctcctt 180

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2635494_1.TXT

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<210> 22

<211> 181

<212> PRT

<213> mouse

<400> 22

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Ser Leu Thr Gly Pro Gly Ser Val Ser Gly Tyr Val Gly Gly Ser Leu
20     25     30
Arg Val Gln Cys Gln Tyr Ser Pro Ser Tyr Lys Gly Tyr Met Lys Tyr
35     40     45
Trp Cys Arg Gly Pro His Asp Thr Thr Cys Lys Thr Ile Val Glu Thr
50     55     60
Asp Gly Ser Glu Lys Glu Lys Arg Ser Gly Pro Val Ser Ile Arg Asp
65     70     75     80
His Ala Ala Asn Ser Thr Ile Thr Val Ile Met Glu Asp Leu Ser Glu
85     90     95
Asp Asp Ala Gly Ser Tyr Trp Cys Lys Ile Gln Thr Ser Phe Ile Trp
100    105    110
Asp Ser Trp Ser Arg Asp Pro Ser Val Ser Val Arg Val Asn Val Phe
115    120    125

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2635494_1.TXT

Pro Val Asn Ser Gly Gln Asn Leu Arg Ile Ser Thr Asn Val Met Phe
130 135 140

Ile Phe Gln Leu Trp Ser Leu Leu Ser Ser Ile Gln Phe Gln Val Leu
145 150 155 160

Val Phe Leu Lys Leu Pro Leu Phe Leu Ser Met Leu Cys Ala Ile Phe
165 170 175

Trp Val Asn Arg Leu
180

<210> 23

<211> 2487

<212> DNA

<213> mouse

<400> 23

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2635494_1.TXT

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<210> 24

<211> 221

<212> PRT

<213> mouse

<400> 24

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Thr Ala Gln Asp Ser Val Thr Gly Pro Glu Glu Val Ser Gly Gln Glu
20 25 30

Gln Gly Ser Leu Thr Val Gln Cys Arg Tyr Ser Ser Tyr Trp Lys Gly
35 40 45

Tyr Lys Lys Tyr Trp Cys Arg Gly Val Pro Gln Arg Ser Cys Asp Ile
50 55 60

Leu Val Glu Thr Asp Lys Ser Glu Gln Leu Val Lys Lys Asn Arg Val
65 70 75 80

Ser Ile Arg Asp Asn Gln Arg Asp Phe Ile Phe Thr Val Thr Met Glu
85 90 95

Asp Leu Arg Met Ser Asp Ala Gly Ile Tyr Trp Cys Gly Ile Thr Lys
100 105 110

Gly Gly Pro Asp Pro Met Phe Lys Val Asn Val Asn Ile Asp Gln Ala
115 120 125

Pro Lys Ser Ser Met Met Thr Thr Thr Ala Thr Val Leu Lys Ser Ile
130 135 140

Gln Pro Ser Ala Glu Asn Thr Gly Lys Glu Gln Val Thr Gln Ser Lys
145 150 155 160

Glu Val Thr Gln Ser Arg Pro His Thr Arg Ser Leu Leu Ser Ser Ile
165 170 175

Tyr Phe Leu Leu Met Val Phe Val Glu Leu Pro Leu Leu Leu Ser Met
180 185 190

Leu Ser Ala Val Leu Trp Val Thr Arg Pro Gln Arg Cys Phe Gly Arg
195 200 205

Gly Glu Asn Asp Leu Val Lys Thr His Ser Pro Val Ala
210 215 220

<210> 25

<211> 1307

<212> DNA

<213> mouse

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<210> 26

<211> 296

<212> PRT

<213> mouse

<400> 26

Met His Leu Ser Leu Leu Val Pro Phe Leu Phe Trp Ile Thr Gly Cys
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Cys Thr Ala Glu Asp Pro Val Thr Gly Pro Glu Glu Val Ser Gly Gln
Page 25

20

25

30

Glu Gln Gly Ser Leu Thr Val Gln Cys Arg Tyr Thr Ser Gly Trp Lys
 35 40 45

Asp Tyr Lys Lys Tyr Trp Cys Gln Gly Val Pro Gln Arg Ser Cys Lys
 50 55 60

Thr Leu Val Glu Thr Asp Ala Ser Glu Gln Leu Val Lys Lys Asn Arg
 65 70 75 80

Val Ser Ile Arg Asp Asn Gln Arg Asp Phe Ile Phe Thr Val Thr Met
 85 90 95

Glu Asp Leu Arg Met Ser Asp Ala Gly Ile Tyr Trp Cys Gly Ile Thr
 100 105 110

Lys Val Pro Thr Met Pro Pro Ile Thr Ser Thr Thr Thr Ile Phe Thr
 115 120 125

Val Thr Thr Thr Val Lys Glu Thr Ser Met Phe Pro Thr Leu Thr Ser
 130 135 140

Tyr Tyr Ser Asp Asn Gly His Gly Gly Gly Asp Ser Gly Gly Gly Glu
 145 150 155 160

Asp Gly Val Gly Asp Gly Phe Leu Asp Leu Ser Val Leu Leu Pro Val
 165 170 175

Ile Ser Ala Val Leu Leu Leu Leu Leu Leu Val Ala Ser Leu Phe Ala
 180 185 190

Trp Arg Met Val Arg Arg Gln Lys Lys Asp Leu Ser Leu Lys Gln Pro
 195 200 205

Arg Thr Ser Pro Gly Ser Ser Trp Lys Lys Gly Ser Ser Met Ser Ser
 210 215 220

Ser Gly Lys Asp His Gln Glu Glu Val Glu Tyr Val Thr Met Ala Pro
 225 230 235 240

Phe Pro Arg Glu Glu Val Ser Tyr Ala Ala Leu Thr Leu Ala Gly Leu
 245 250 255

Gly Gln Glu Pro Thr Tyr Gly Asn Thr Gly Cys Pro Ile Thr His Val
 260 265 270

Pro Arg Thr Gly Leu Glu Glu Glu Thr Thr Glu Tyr Ser Ser Ile Arg
 275 280 285

Arg Pro Leu Pro Ala Ala Met Pro
 290 295

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<211> 114

<212> PRT

<213> mouse

<400> 27

Gly Cys Cys Thr Ala Gln Asp Pro Val Thr Gly Pro Glu Glu Val Ser
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Gly Gln Glu Gln Gly Ser Leu Thr Val Gln Cys Arg Tyr Asp Ser Gly
 20 25 30

Trp Lys Asp Tyr Lys Lys Tyr Trp Cys Arg Gly Ala Tyr Trp Lys Ser
 35 40 45

Cys Glu Ile Leu Val Glu Thr Asp Ala Ser Glu Gln Leu Val Lys Glu
 50 55 60

Asn Arg Val Ser Ile Arg Asp Asp Gln Thr Asp Phe Ile Phe Thr Val
 65 70 75 80

Thr Met Glu Asp Leu Arg Met Ser Asp Ala Asp Ile Tyr Trp Cys Gly
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Ile Thr Lys Ala Gly Thr Asp Pro Met Phe Lys Val Asn Val Asn Ile
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Asp Pro

<210> 28

<211> 295

<212> PRT

<213> homosapiens

<400> 28

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 Ser Ile Val Thr Gln Ile Thr Gly Pro Thr Thr Val Asn Gly Leu Glu
 20 25 30
 Arg Gly Ser Leu Thr Val Gln Cys Val Tyr Arg Ser Gly Trp Glu Thr
 35 40 45
 Tyr Leu Lys Trp Trp Cys Arg Gly Ala Ile Trp Arg Asp Cys Lys Ile
 50 55 60
 Leu Val Lys Thr Ser Gly Ser Glu Gln Glu Val Lys Arg Asp Arg Val
 65 70 75 80
 Ser Ile Lys Asp Asn Gln Lys Asn Arg Thr Phe Thr Val Thr Met Glu
 85 90 95
 Asp Leu Met Lys Thr Asp Ala Asp Thr Tyr Trp Cys Gly Ile Glu Lys
 100 105 110
 Thr Gly Asn Asp Leu Gly Val Thr Val Gln Val Thr Ile Asp Pro Ala
 115 120 125
 Pro Val Thr Gln Glu Glu Thr Ser Ser Ser Pro Thr Leu Thr Gly His
 130 135 140
 His Leu Asp Asn Arg His Lys Leu Leu Lys Leu Ser Val Leu Leu Pro
 145 150 155 160
 Leu Ile Phe Thr Ile Leu Leu Leu Leu Leu Val Ala Ala Ser Leu Leu
 165 170 175
 Ala Trp Arg Met Met Lys Tyr Gln Gln Lys Gly Glu Arg Thr Trp Val
 180 185 190
 Leu Gln Pro Leu Glu Gly Asp Leu Cys Tyr Ala Asp Leu Thr Leu Gln
 195 200 205
 Leu Ala Gly Thr Ser Pro Gln Lys Ala Thr Thr Lys Leu Ser Ser Ala
 210 215 220
 Gln Val Asp Gln Val Glu Val Glu Tyr Val Ala Ala Gly Met Ser Pro
 225 230 235 240
 Glu Gln Thr Met Ala Ser Leu Pro Lys Glu Asp Ile Ser Tyr Ala Ser
 245 250 255

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Leu Thr Leu Gly Ala Glu Asp Gln Glu Pro Thr Tyr Cys Asn Met Gly
260 265 270

His Leu Ser Ser His Leu Pro Gly Arg Gly Pro Glu Glu Pro Thr Glu
275 280 285

Tyr Ser Thr Ile Ser Arg Pro
290 295